

1 **Cont** 3. (Amended) A process according to claim 1 wherein the
2 hydrocarbon is a straight chain hydrocarbon or a branch chain hydrocarbon.

1 6. (Amended) A process according to claim 1 wherein the
2 hydrocarbon is selected from methane, propane, butane, hexane, heptane, normal-
3 octane, iso-octane, naphthas, liquified petroleum gas, reformulated petrol and
4 diesel-type fuels.

1 7. (Amended) A process according to claim 1 wherein the
2 oxygen-containing gas is air.

1 8. (Amended) A process according to claim 1 wherein rhodium
2 comprises 0.1 weight *per cent* to 5 weight *per cent* of the total weight of the
3 supported catalyst.

1 10. (Amended) A process according to claim 1 wherein the
2 refractory oxide support material is a mixture of ceria and zirconia.

1 13. (Amended) A process according to claim 1 wherein the
2 catalyst is pre-heated to a temperature at which self-sustaining partial oxidation of
3 the hydrocarbon commences.

1 18. (Amended) A process according to claim 1 wherein the
2 mixture of the hydrocarbon and the oxygen-containing gas is fed to the catalyst
3 when the catalyst has reached the temperature at which self-sustaining partial
4 oxidation of the hydrocarbon will occur.

1 19. (Amended) A process as claimed in claim 1 operated in
2 combination with a catalysed water-gas shift reaction for the reduction of carbon
3 monoxide in the hydrogen produced from the hydrogen.

1 21. (Amended) A process according to claim 19 wherein the
2 water-gas shift reaction catalyst is added to the rhodium based catalyst for the
3 hydrogen generation reaction.